AIRLINK 101™

# Super G Wireless USB 2.0 Adapter

# Model # AWLL4030

# User's Manual

Ver. 1A

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# 1. Introduction

Thank you for purchasing the Super G Wireless USB 2.0 Adapter. This USB Adapter is designed to comply with IEEE 802.11g Wireless LAN standard and is easy to carry with its minimal size. It is suitable for any laptop or desktop computer.

This Adapter supports 64/128/152-bit WEP data encryption that protects your wireless network from eavesdropping. It also supports WPA (Wi-Fi Protected Access) feature that combines IEEE 802.1x and TKIP (Temporal Key Integrity Protocol) technologies. Client users are required to authorize before accessing the APs or AP Routers, and the data transmitted in the network is encrypted/decrypted by a dynamically changing secret key.

The Adapter supports the Super G mode feature which enhances the data rate to 108Mbps when it is connected to a Super G compatible device.

## *1.1 Features*

- Complies with IEEE 802.11b and IEEE 802.11g 2.4GHz standards.
- Up to 54Mbps high data transfer rate (108Mbps in Super G mode).
- Supports 64/128/152-bit WEP, WPA, and IEEE 802.1x high-level security.
- Complies with IEEE 802.11d country roaming standard.
- Supports the most popular operating system: Windows 98SE/ME/2000/XP.
- Supports USB 2.0/1.1/1.0 interface.
- Portable and mini-size design.
- Suitable for any notebook or desktop PC.

## *1.2 Specifications*

- Standard: IEEE 802.11g/b
- Bus Type: USB 2.0 Type A
- Frequency Band: 2.4000~2.4835GHz (Industrial Scientific Medical Band)
- Modulation: OFDM with BPSK, QPSK, 16QAM, 64QAM (11g)
  BPSK, QPSK, CCK (11b)
- Data Rate: 54/48/36/24/18/12/11/9/6/5.5/2/1Mbps auto fallback (108Mbps: Super G enabled)
- Security: 64/128/152-bit WEP Data Encryption, WPA , IEEE 802.1x
- Antenna: Internal Antenna
- Drivers: Windows 98SE/ME/2000/XP



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- LED: Link/Activity
- Transmit Power: 16dBm (Typical)
- Dimension: 9(H) x 27(W) x 87(D)
- Temperature: 32~131℉ (0 ~55℃)
- Humidity: 0-95% (Non-Condensing)
- Certification: FCC, CE

## *1.3 Package Contents*

Before you begin the installation, please check the items of your package. The package should include the following items:

- One Super G Wireless USB Adapter
- One USB 2.0 Extension Cable (100 cm)
- One Quick Installation Guide
- One Installation CD (Driver/Utility/Manual)



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# 2 Installation

## *2.1 Installation for Windows 98SE/ME*

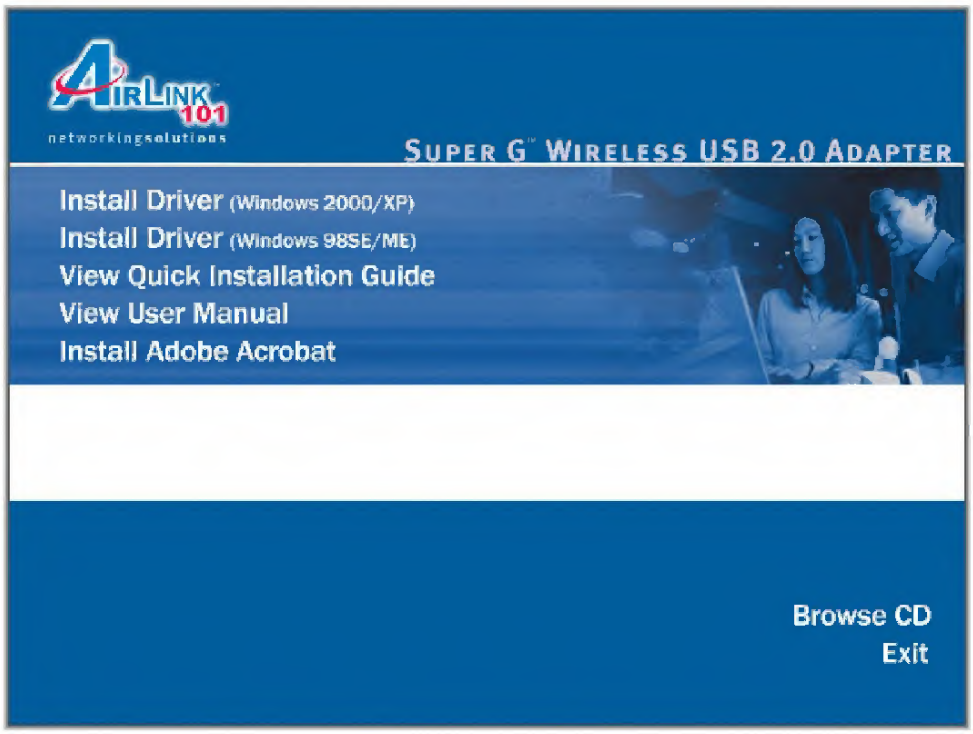
**The following steps are for Windows 98SE/ME**

**Note:** **Do not** insert the USB Adatper into the computer until you've reached the appointed step.

**Step 1** Insert the Installation CD into the CD drive and wait for the autorun screen to appear.

**Note:** If the autorun screen doesn't appear automatically go to **Start**, **Run**, and type **D:\autorun.exe** (where **D** is the letter of your CD drive) and click **OK**.

**Step 2** Click **Install Driver (Windows 98SE/ME)**.




**Step 3** Click **Next** at the welcome screen.

**Step 4** Click **Next** to accept the License Agreement.

**Step 5** Verify **Install Client Utilities and Driver** is selected and click **Next**.



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**Step 6** Click **Yes** to acknowledge the need for a reboot after the installation.

**Step 7** Click **Next** to accept the default Destination Folder.

**Step 8** Click **OK** to acknowledge the prompt.

**Step 9** Click **OK** to reboot your computer.

**Step 10** After your computer is restarted, insert the USB Adapter into the computer.

**Step 11** Click **Next** at the Add New Hardware Wizard.

**Step 12** Verify **Search for the best driver for your device** is selected and click **Next**.

**Step 13** Click **Next** to install the driver.

**Step 14** Click **Finish** to exit the wizard.

**Step 15** Restart the computer to complete the driver installation.



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## *2.2 Installation for Windows 2000/XP*

**The following steps are for Windows 2000/XP.**

**For Windows 2000/XP, you must update your USB driver to USB 2.0**

**For Windows XP you must install Service Pack 2 prior to installing the USB Adapter.**

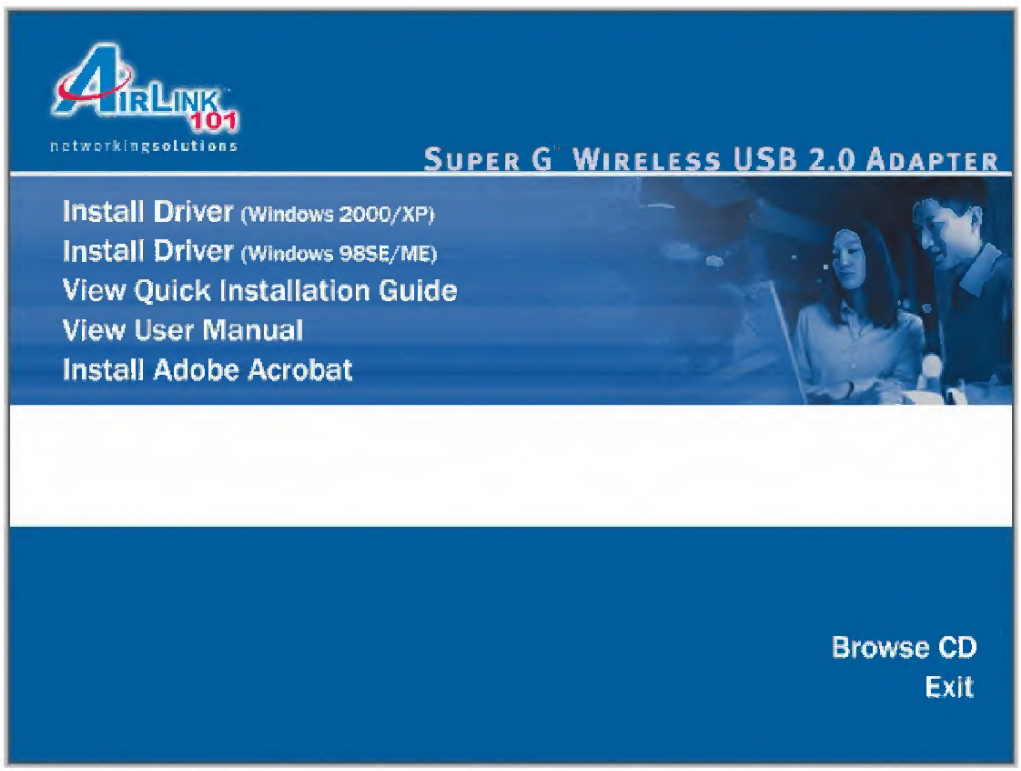
**Note:** Whenever the Found New Hardware Wizard appears, click **Cancel** to quit the wizard and continue with the installation.

**Step 1** Insert the Wireless USB Adapter to the computer's USB port.

**Step 2** Insert the Installation CD into the CD drive and wait for the autorun screen to appear.

**Note:** If the autorun screen doesn't appear automatically go to **Start**, **Run**, and type **D:\autorun.exe** (where **D** is the letter of your CD drive) and click **OK**.

**Step 3** Click **Install Driver (Windows 2000/XP)**.



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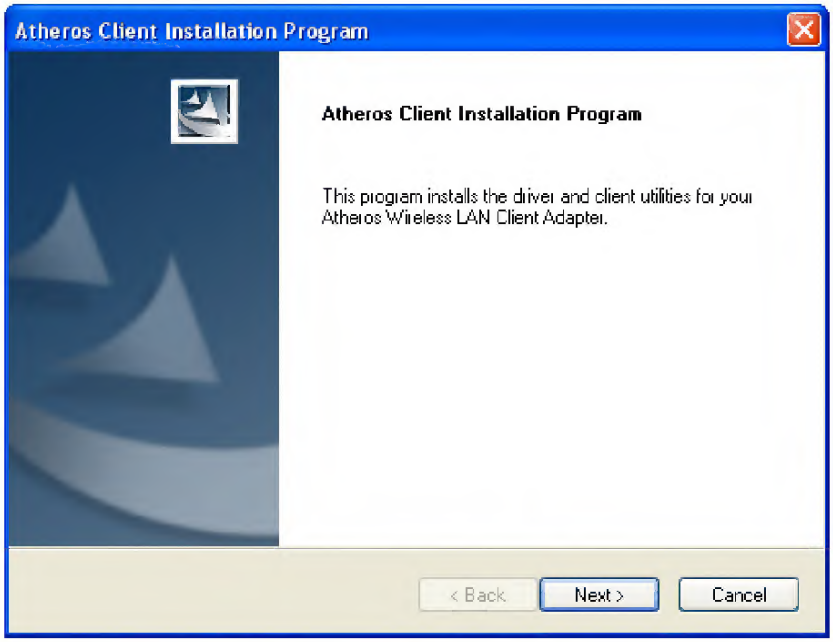
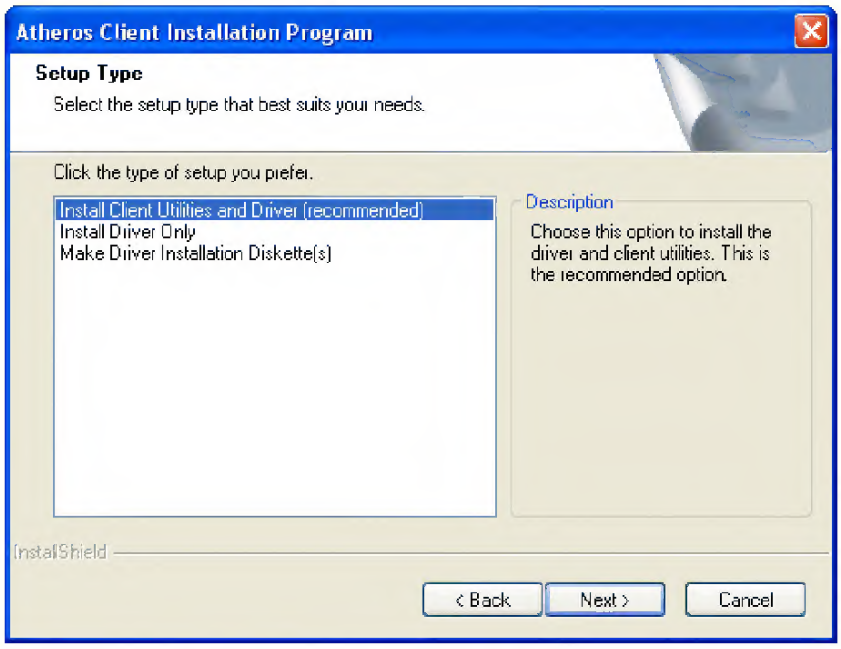
**Step 4** Click **Next** at the welcome screen.


Atheros Client Installation Program
Atheros Client Installation Program
This program installs the driver and client utilities for your Atheros Wireless LAN Client Adapter.
< Back
Next >
Cancel

**Step 5** Click **Next** to accept the License Agreement.

**Step 6** Verify **Install Client Utilities and Driver** is selected and click **Next**.


Atheros Client Installation Program
Setup Type
Select the setup type that best suits your needs.
Click the type of setup you prefer.
Install Client Utilities and Driver (recommended)
Install Driver Only
Make Driver Installation Diskette(s)
Description
Choose this option to install the driver and client utilities. This is the recommended option.
InstallShield
< Back
Next >
Cancel



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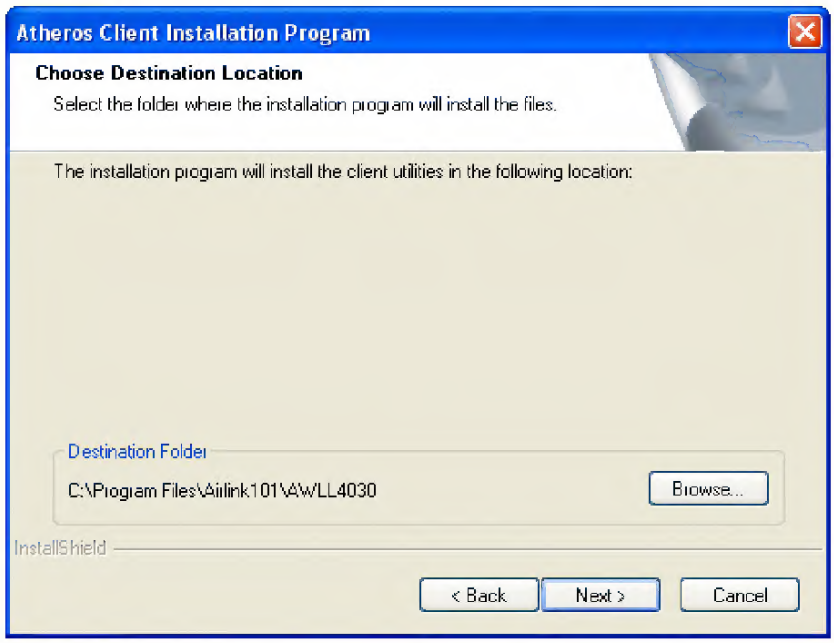
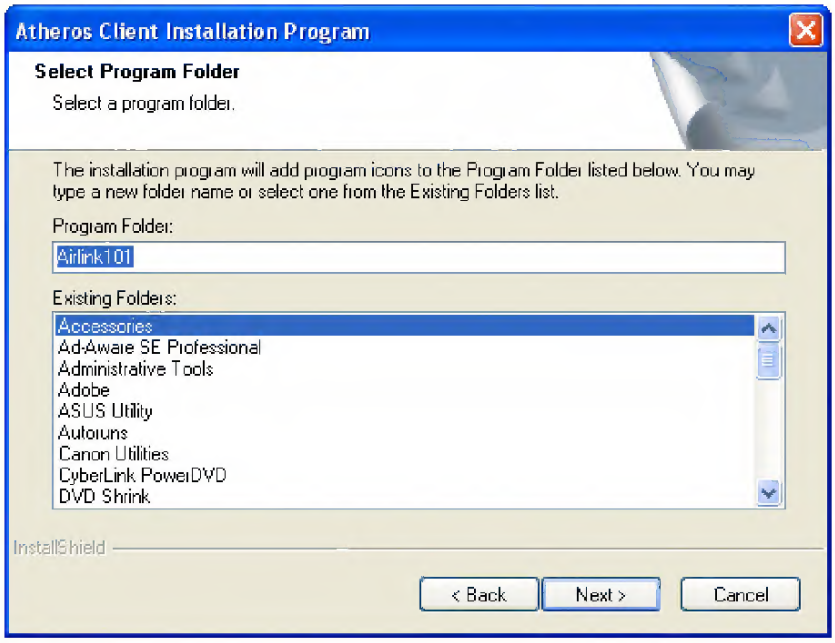
**Step 7** Click **Yes** to acknowledge the need for a reboot after the installation.

**Step 8** Click **Next** to accept the default Destination Folder.


Atheros Client Installation Program
Choose Destination Location
Select the folder where the installation program will install the files.
The installation program will install the client utilities in the following location:
Destination Folder
C:\Program Files\Airlink101\AWLL4030
Browse...
InstallShield
< Back
Next >
Cancel

**Step 9** Click **Next** to accept the default Program Folder.



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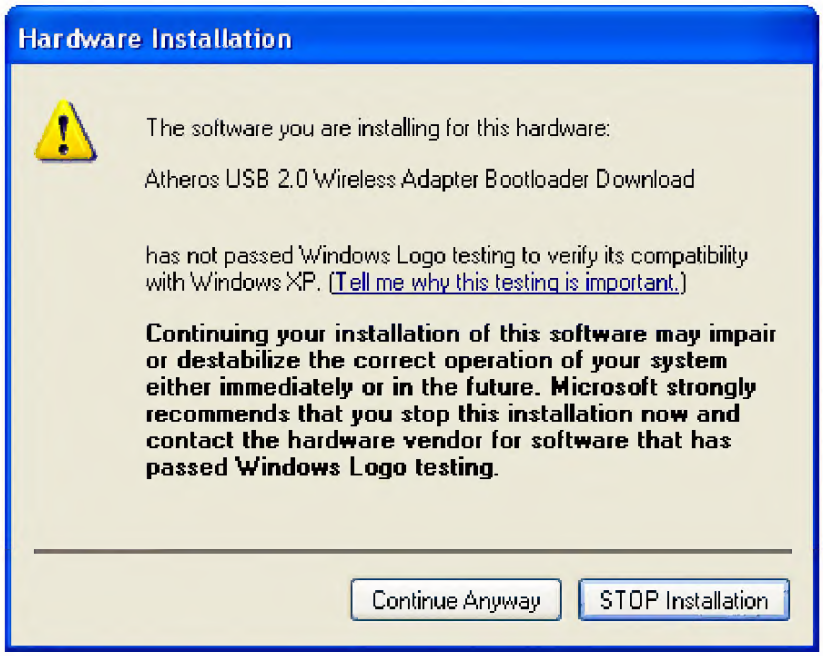
**Step 10** Read the notes carefully and click **Next**.

**Step 11** Verify **Atheros Client Utlity and Supplicant** is selected and click **Next**.

**Step 12** Click **OK** to acknowledge the prompt.

Atheros Client Installation Program
This installation program installs the drivers automatically.
Cancel the Found New Hardware Wizard if it appears and proceed with installation
OK

**Step 13** Click **Continue Anyway** at the Windows Logo prompt for the Bootloader Download. (Click **Yes** for Windows 2000).


Hardware Installation
The software you are installing for this hardware:
Atheros USB 2.0 Wireless Adapter Bootloader Download
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation



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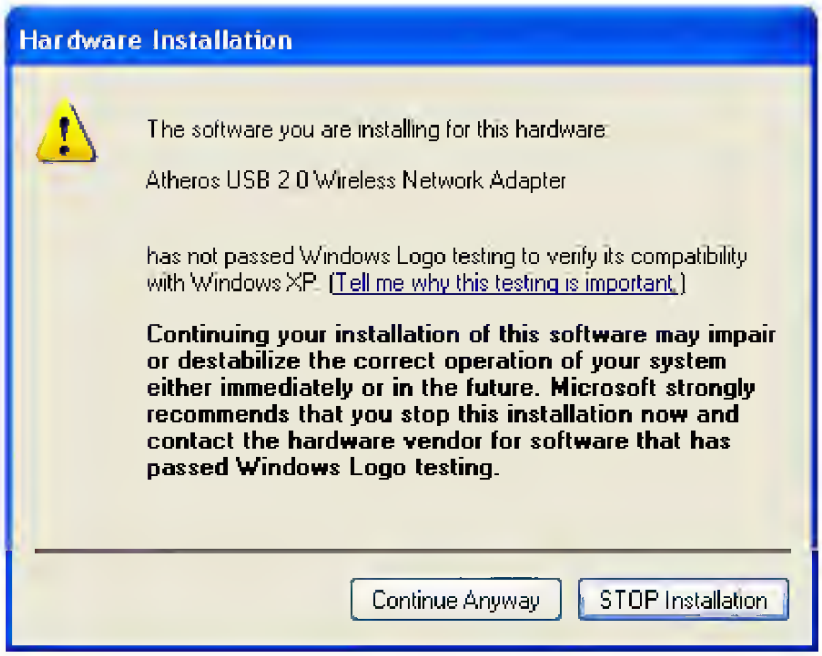
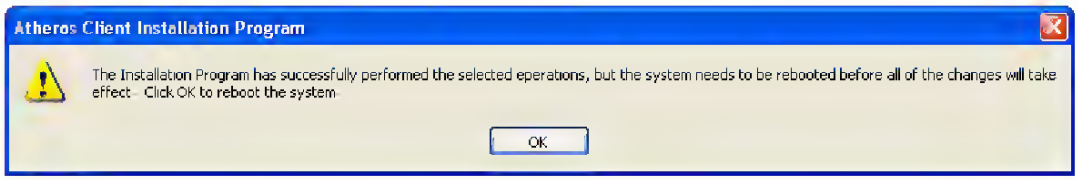
**Step 14** Click **Continue Anyway** at the Windows Logo prompt for the Wireless Network Adapter (Click **Yes** for Windows 2000).


Hardware Installation
The software you are installing for this hardware:
Atheros USB 2.0 Wireless Network Adapter
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

**Step 15** Click **OK** to reboot your computer.


Atheros Client Installation Program
The Installation Program has successfully performed the selected operations, but the system needs to be rebooted before all of the changes will take effect. Click OK to reboot the system.
OK



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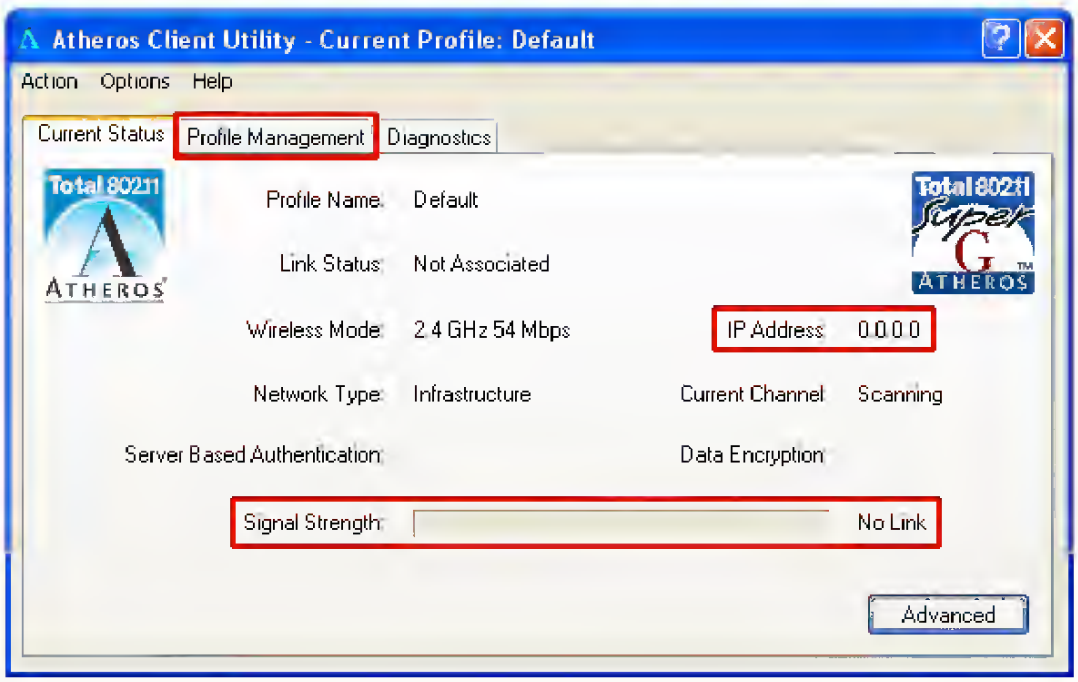
# 3. Configure USB Adapter

**The following steps are for Windows 98SE/ME/2000/XP.**

**If you already have signal strength and valid IP address, you do not need to perform the following steps.**

**Step 1** Start the **Atheros Client Utility** by double-clicking on it from your desktop.

**Step 2** If there is no Signal Strength and/or the IP Address is all 0's, select the **Profile Managment** tab.



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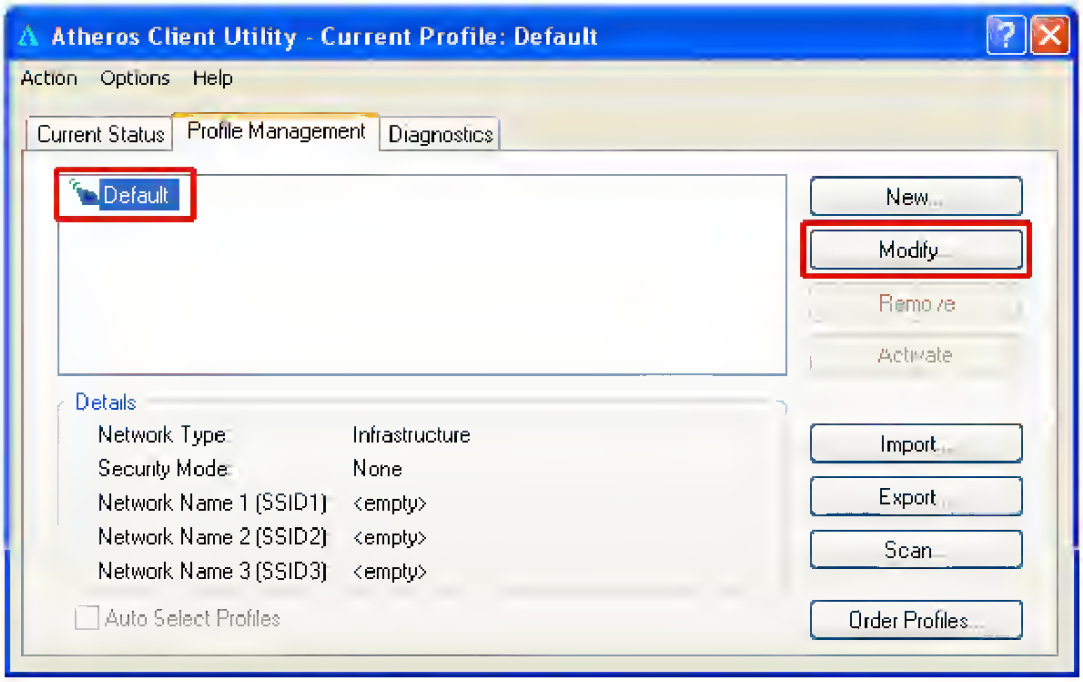
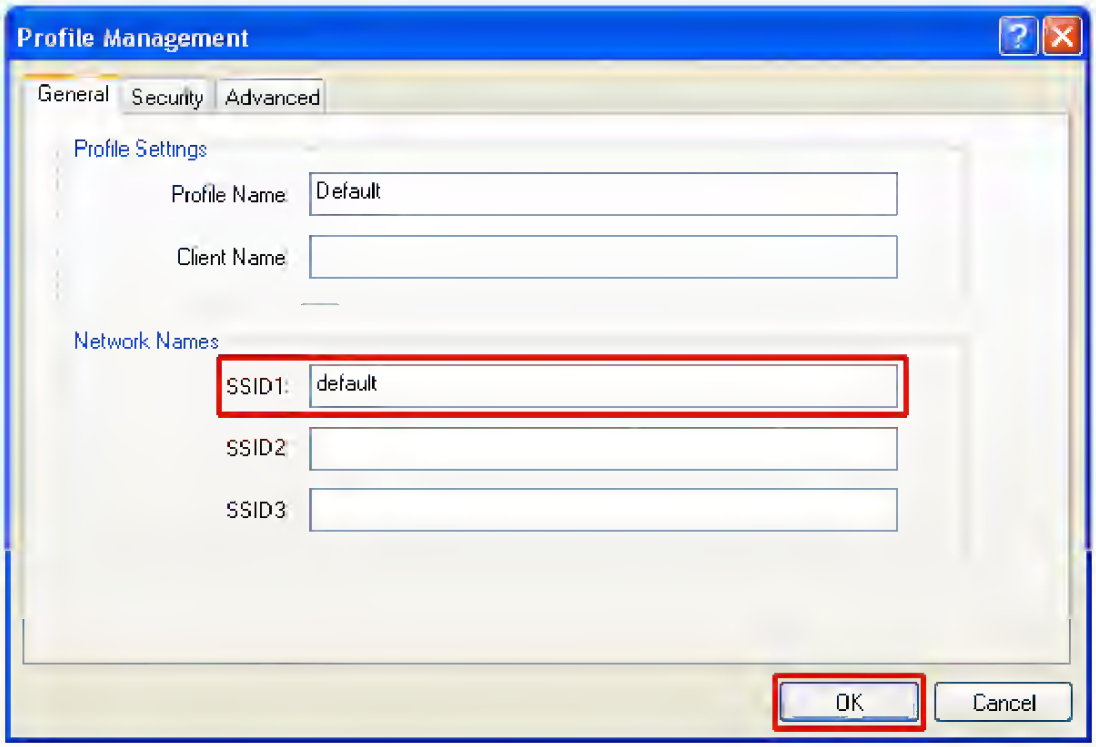
**Step 3** Select the **Default** profile and click **Modify**.




**Step 4** Enter the **SSID** (Network Name) that your wireless router/access point is using in the SSID field and click **OK**.



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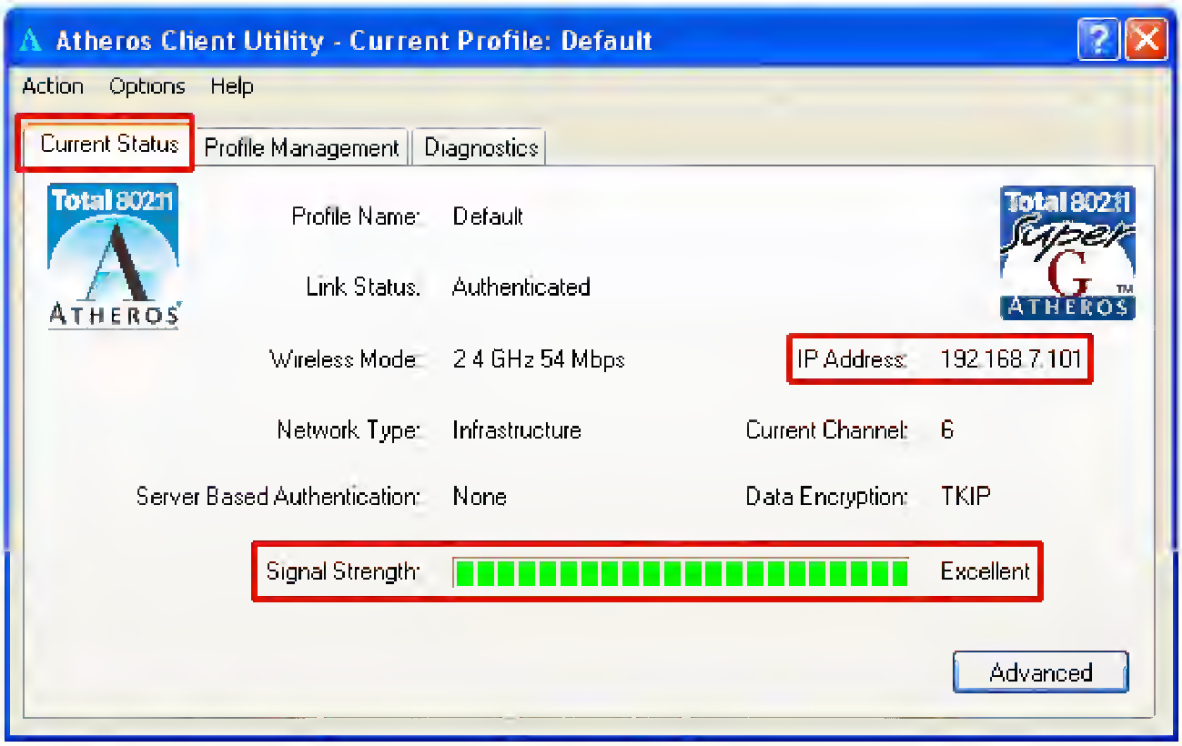
**Step 5** Return to the **Current Status** tab and verify that you have signal strength and valid IP address.




If your wireless router/access point has encryption enabled, you'll need to apply the same encryption settings to the Adapter as well. For information on how to configure encryption, please refer to Section 4.3.2 of this manual for more detail.



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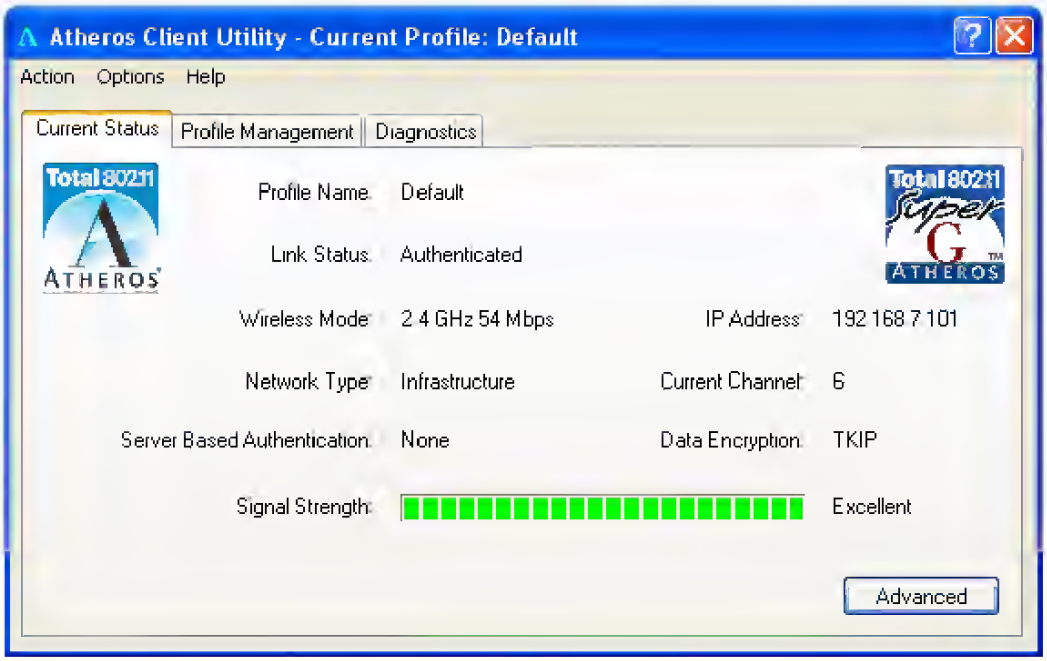
# 4. Configure Client Utility

The Client Utility is a user-friendly utility designed to configure the wireless settings of the USB Adapter as well as to display its network status.

## *4.1 Current Status*

When you open the Client Utility, the system will scan all the channels to find all the access points/stations within the accessible range of your Adapter and automatically connect to the wireless device with the highest signal strength.

From this tab, you can see all the infomration about the wireless connection.



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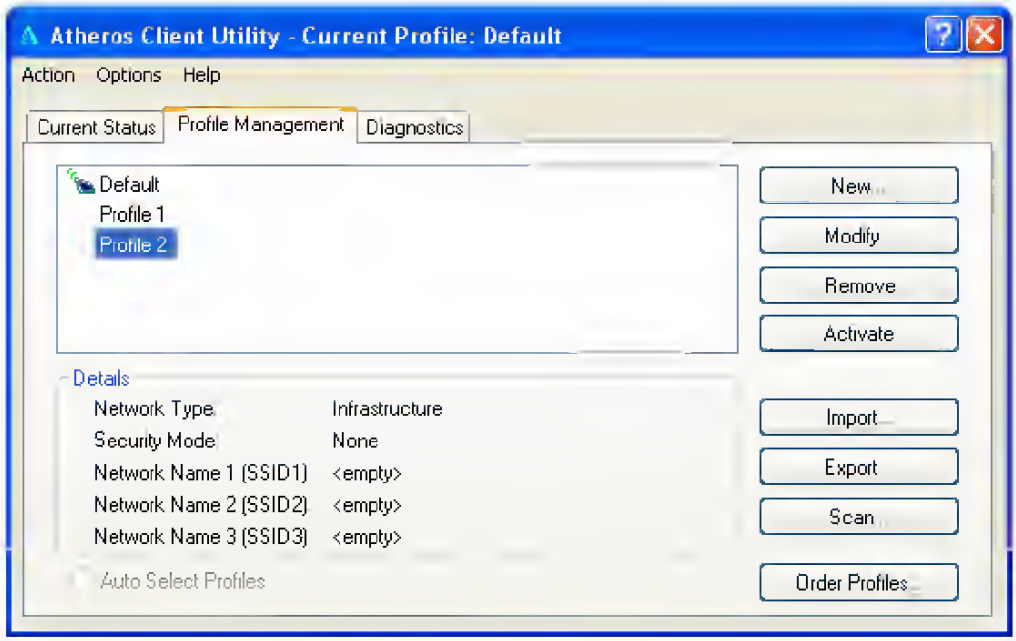
## *4.2 Profile Management*

The Profile Managment tab allows you to add and edit profiles for your USB Adapter. Profiles are used to save various settings so you can easily choose between them without having to manually set the settings each time.




| Parameter | Description |
|---|---|
| New | To add a new profile, click **New** on the Profile Management tab. |
| Modify | To modify an existing profile, select the desired profile from the list and click **Modify**. For more information, see 4.3. |
| Remove | To remove a profile, select the desired profile from the list and click **Remove**. |
| Import | You can import an existing profile if you have previously saved it as a file in your hard drive. |
| Export | You can export a profile and save it as a file in your hard drive. |



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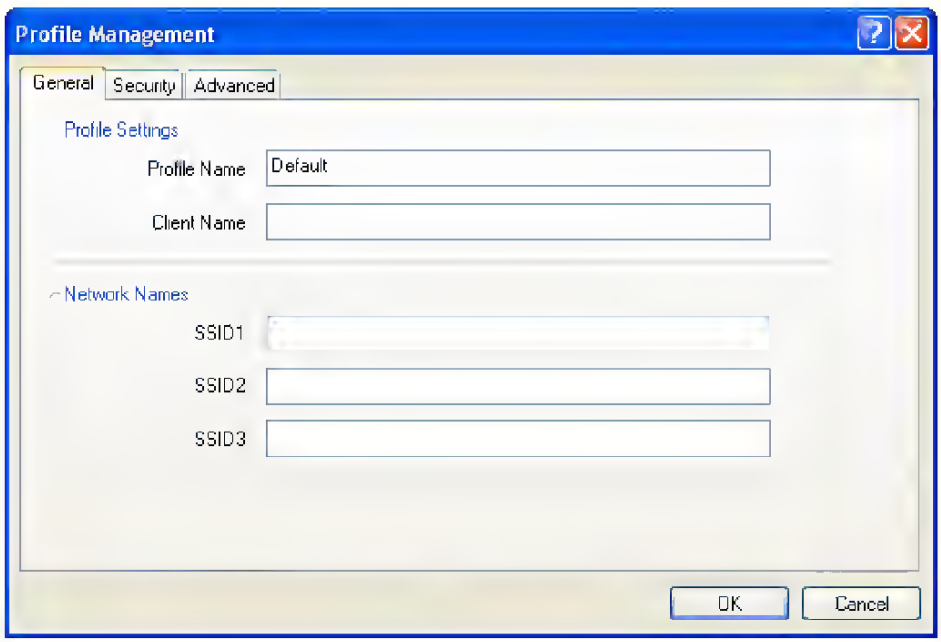
Order Profiles

Including a profile in the auto selection list allows the Adapter to automatically select that profile from the list and use it to connect to the network.

## *4.3 Modifying Profiles*

### 4.3.1 General tab




The General tab allows you to set up to three SSIDs for each profile. Enter the SSID of your wireless network in the applicable fields.



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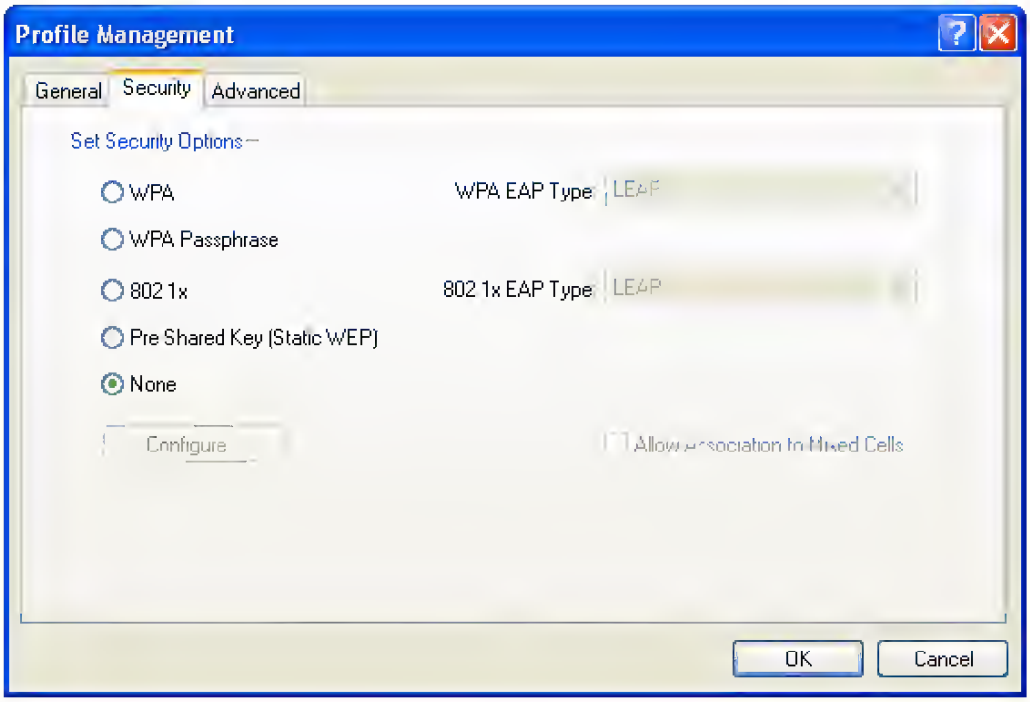
### 4.3.2 Security




By default, wireless security is turned off. To enable encryption, select the appropriate security option from the list. You must use the same encryption settings as your wireless router/access point.

It is recommended to use WPA Passphrase if your wireless router/access point is capable of using WPA security.

To access the Security tab, first select a profile from the Profile Management tab and click Modify, then click on the Security tab.



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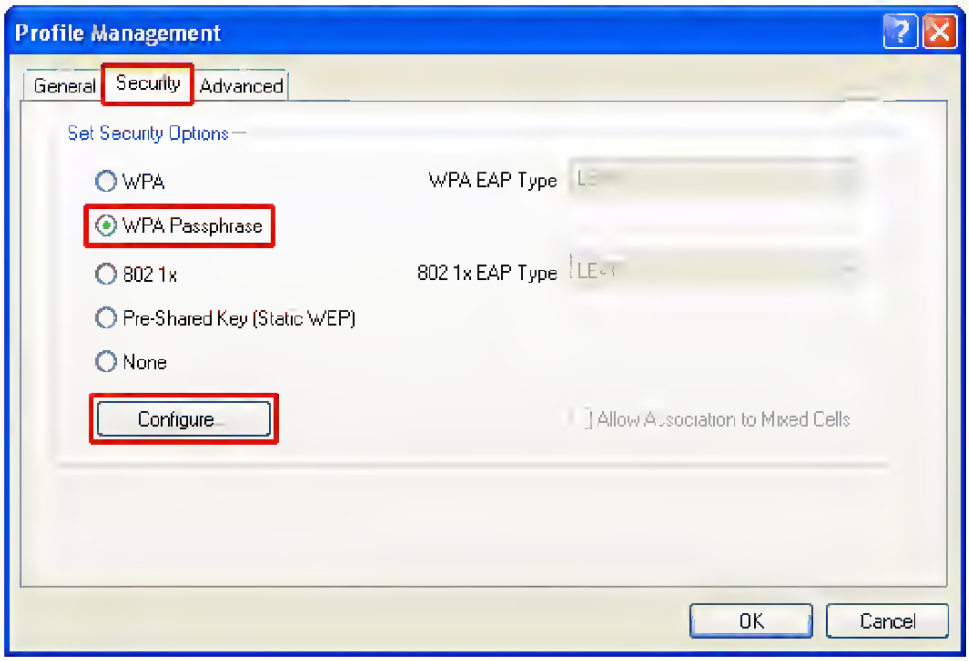
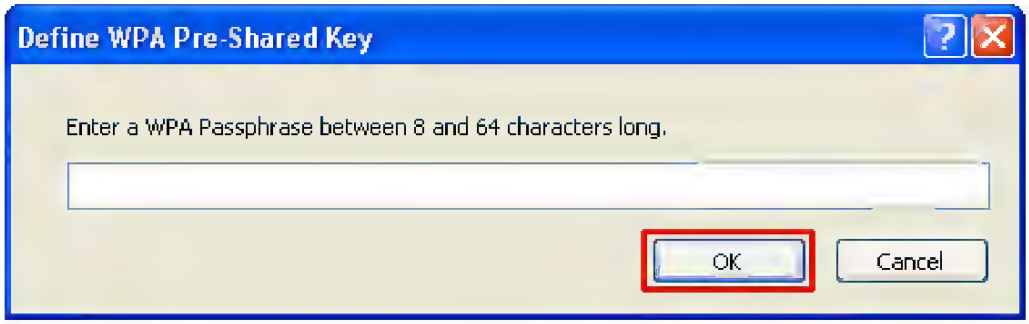
To enable WPA encryption, select **WPA Passphrase** from the list and click **Configure**.




Enter a Passphrase between 8 and 64 characters long and click **OK**. The Passphrase must be the same as your wireless router/access point is using.




The Adapter will rescan the network and connect to the wireless router/access point using the provided Passphrase.



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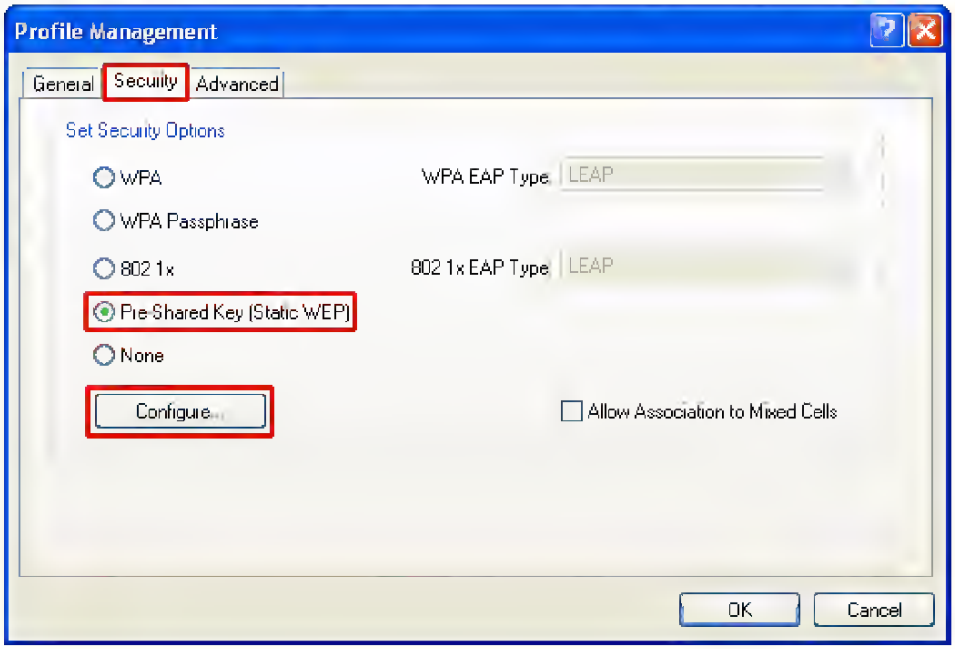
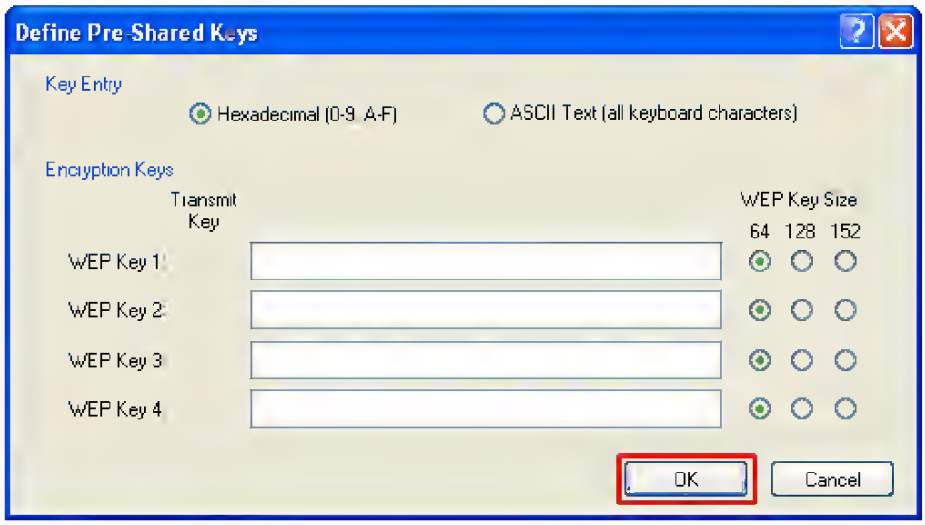
To enable WEP encryption, select Pre-Shared Key (Static WEP) from the list and click Configure.




Enter the appropriate WEP key values in the applicable fields. The key values, key size, and key entry must be exactly the same as your wireless router/access point is using. Click **OK** when done.



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| Key Button | Description |
|---|---|
| Key Entry | Determines the entry method for an encryption key: hexadecimal (0-9, A-F), or ASCII text (all keyboard characters except spaces). |
| Encryption Keys | Selects the default encryption keys to be used. The Key number must match that of the wireless router/access point. |
| WEP Keys (1-4) | Click on the radio button to set the key as the default encryption key. |
| WEP Key Size | Defines the size for each encryption key. The options include:<br>64-bit (enter 10 digits for hexadecimal, 5 ASCII characters)<br>128-bit (enter 26 digits for hexadecimal, 13 digits for ASCII)<br>152-bit (enter 32 digits hexadecimal, 16 digits for ASCII) |

The Adapter will rescan the network and connect to the wireless router/access point using the provided WEP key.



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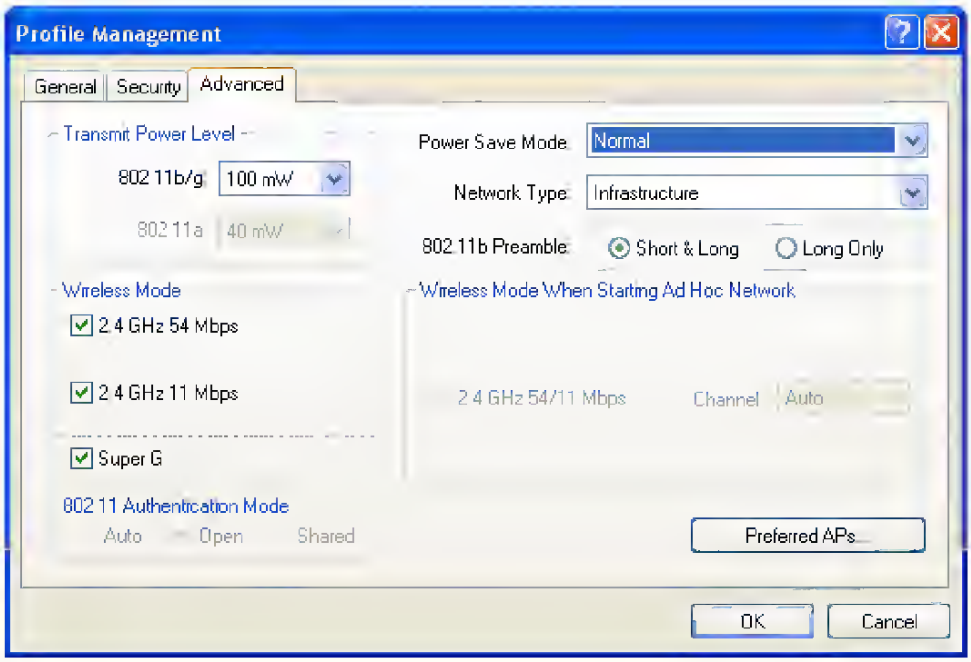
### 4.3.3 Advanced

The Advanced tab allows you to fine-tune the Adapter's wireless settings.




**Transmit Power Level**: Use the drop-down menu to select the desired transmit power level for the Adapter.

**Wireless Mode**: By default, all modes are enabled. To disable a mode, uncheck the corresponding check box.

**Power Save Mode**: Select the desired power save mode.

**Network Type**: Choose between Infrastructure or Ad-Hoc.

**Note:** You will not be able to access the Internet if you set the Adapter to Ad-Hoc mode. To allow other wireless clients to access the Internet through the Adapter in Ad-Hoc mode, you will need to configure your computer as a router and a DHCP server. The vendor will not provide any technical support in regards to the USB adapter functioning as an access point.

**802.11b Preamble**: Choose between Short & Long or Long Only.



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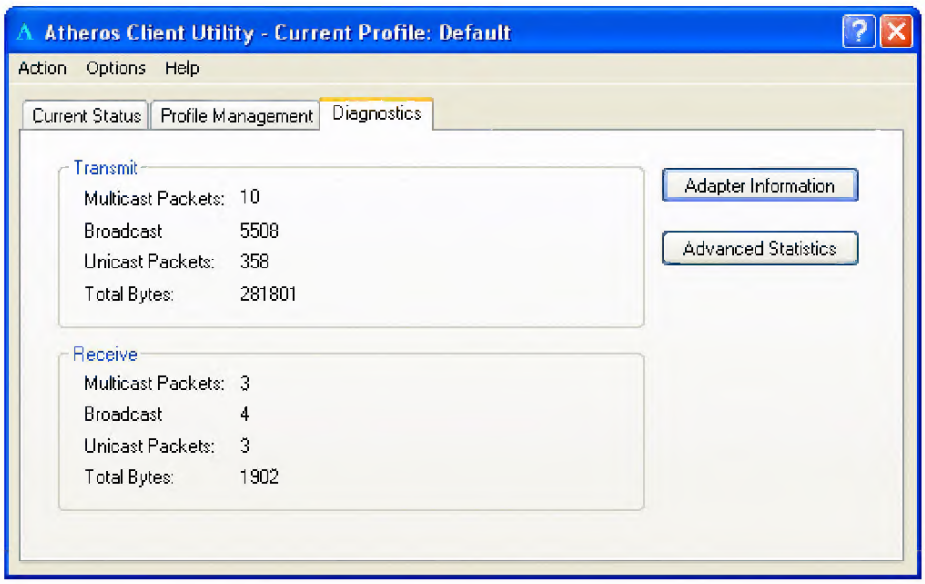
## *4.4 Diagnostics*

The Diagnostics tab provides a list of the Adapters statistics.




| Parameter | Description |
|---|---|
| Adapter Information | The Adapter Information contains general information about the network interface card (the wireless network adapter) and the network driver interface specification (NDIS) driver. |
| Advanced Statistics | Displays even more advanced statistics about the Adapter. |



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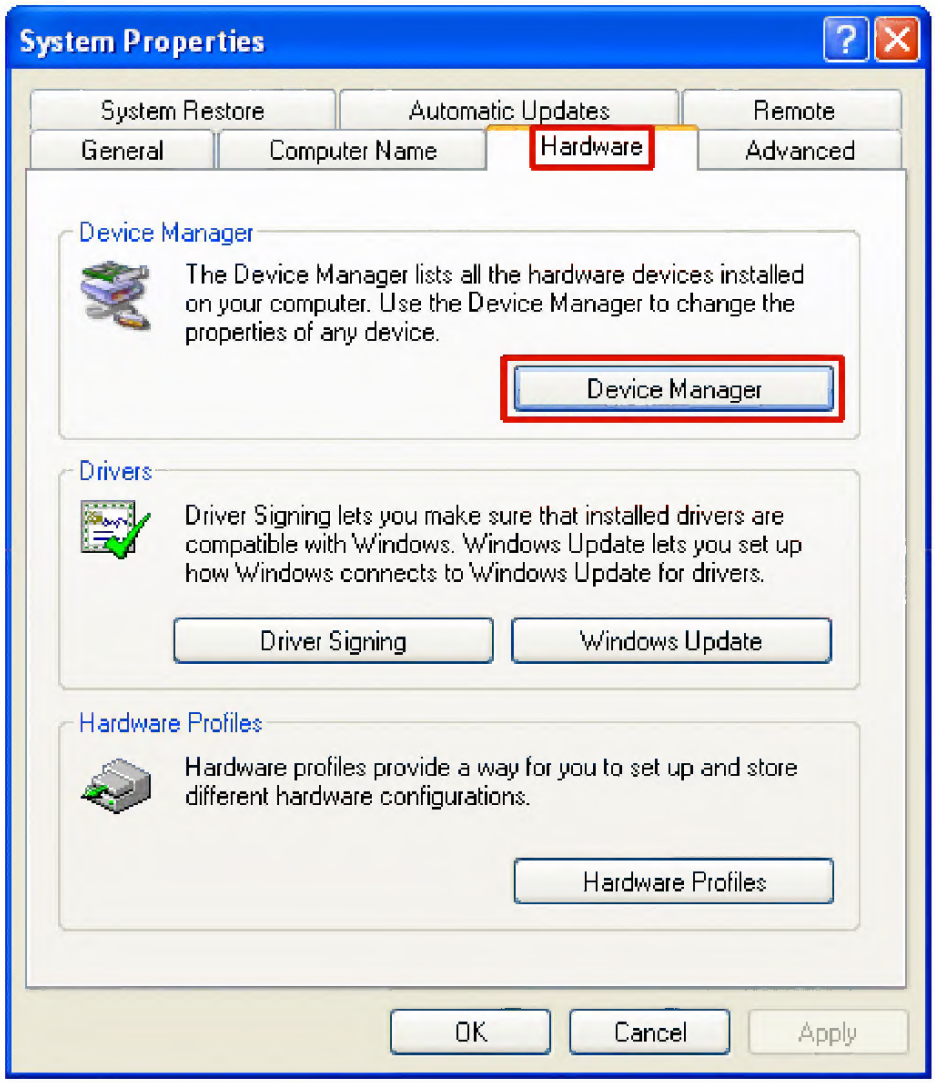
## 5. Verify Driver Installation

To verify if the driver has been installed successfully, please perform the following steps.

**Step 1** Right-click on **My Computer** from your desktop and select **Properties**.

**Step 2** Select the **Hardware** tab and click on **Device Manager**.


System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver Signing
Windows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles
OK
Cancel
Apply



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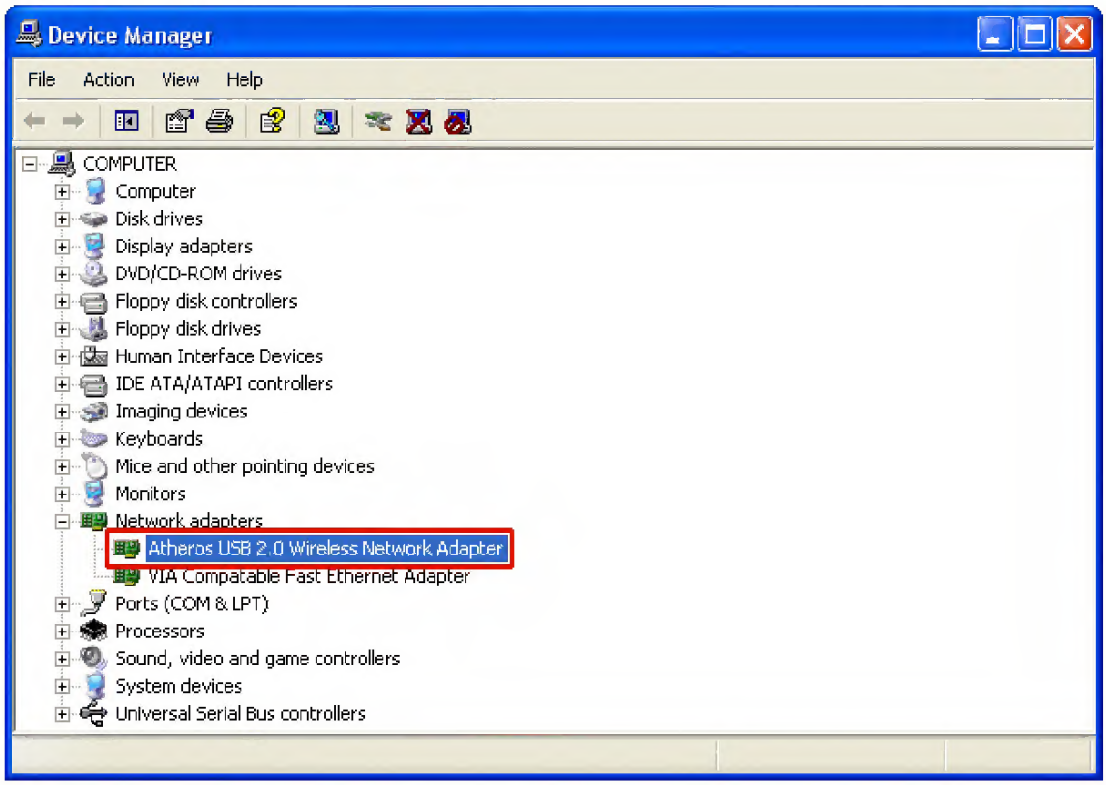
**Step 3** Expand **Network adapters** from the list and verify that **Atheros USB 2.0 Wireless Network Adapter** is listed and no yellow question mark is beside it.




Congratulations! You have successfully installed the Super G Wireless Network Adapter.



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# Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

*Theoretical maximum wireless signal rate based on IEEE standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, mix of wireless products used, radio frequency interference (e.g., cordless telephones and microwaves) as well as network overhead lower actual data throughput rate.

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